Roly-Poly Daruma Doll

Kit contains:

- 2 plastic bottle caps
- modeling clay
- Daruma doll template

You will need: coloring supplies, scissors, and tape.

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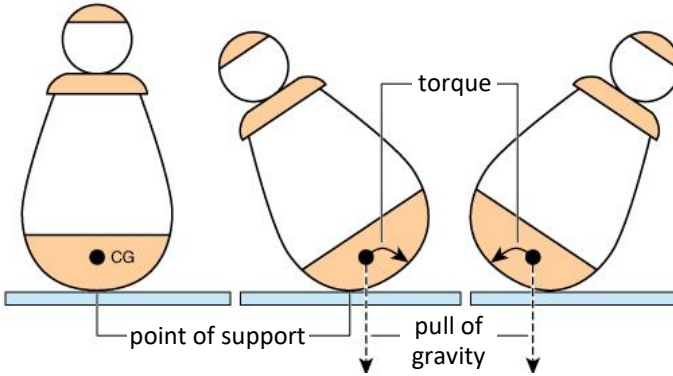
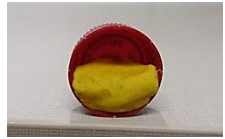
ROLY-POLY TOYS



In an upright roly-poly, the center of gravity (CG) in the weighted bottom is above the point of support. Tipping the roly-poly shifts the center of gravity away from above the point of support. When the roly-poly is released, the force of gravity acts on the center of gravity and produces a torque that makes the toy roll from the point of support. When it reaches the upright position, its inertia makes it roll too far. It rolls back and forth and finally comes to rest standing upright.

(Source: Encyclopedia Britannica)

Step 1: Experiment! You have two different bottle caps in this kit: one shallower and one deeper. Pack modeling clay into the bottom of each cap. Can you create a roly-poly effect? That is, when you tip it to the side, will it roll back up again?



- Can you turn one or both bottle caps into roly-polies? Which one works better?
- What is the least amount of clay you can pack into a cap to create the roly-poly effect?
- What is the most amount of clay you can pack into a cap and maintain the roly-poly effect?

Step 2: Craft! Color your Daruma doll template, leaving the eyes BLANK for now. Cut it out. Tape it to the front of your more successful roly-poly.

DARUMA DOLLS

Daruma dolls are known as symbols of good luck and perseverance in Japanese culture. The faces are modeled after the monk Bodhidharma (5th or 6th century C.E.), founder of Buddhism. The text you often find written on a Daruma is the proverb, “Fall down seven times, stand up eight*.”

The eyes of a Daruma doll start out blank. The owner of a new Daruma makes a wish or sets a goal and colors in one of the eyes. If the wish comes true or you achieve the goal, color in the other eyes, giving it sight.

Daruma bought from a temple are returned at the new year for the Daruma burning ceremony.

***Note:** Though hollow, regular Daruma dolls are not roly-polies. However, a toy that always stands back up again did seem to fit the proverb.